CLAIMS

1.   (Currently Amended) A credit risk mitigation system for swap transactions between counterparties, comprising

a plurality of counterparties;

pairs of the counterparties, interested in forming a swap to hedge a forward contract with each other:

a system counterparty, which forms paired basis swaps with pairs of counterparties interested in forming a swap; the system counterparty making paired, balanced offsetting swaps with the individual members of a pair of counterparties interested in forming a swap and simultaneously creating a swaption with each of the pair of counterparties, the system counterparty including;

a data storage means for retaining all of the swaps the system counterparty enters into with each other counterparty;

communication means coupled to the system counterparty for allowing the system counterparty to communicate with potential pairs of counterparties interested in forming a the swap to receive potential swap contract information and to communicate paired basis swap information to accepted pairs of counterparties and collateral requirements with each accepted swap between the system counterparty and the other counterparty to such swap;

termination means coupled to the system counterparty for determining if a counterparty to an accepted swap is in default and if in default selecting an appropriate response.

2.   (Currently Amended) A method of risk mitigation and collateralization of a swap

used to hedge a forward contract during delivery, comprising:

qualifying a plurality of eligible counterparties, pairs of which desire to

form swaps;

forming offsetting paired basis swaps with a central swap authority for

each of the pairs of counterparties utilizing a data storage device coupled to the central

swap authority for storing all of the swaps the system counterparty enters into with each

other counterparty and a communication device coupled to the central swap authority to

communicate the formation of the paired swaps to each of the pairs of counterparties;

evaluating an initial fixed value at risk for each counterparty to the swaps

with the central swap authority utilizing a communication device coupled to the data

storage device of the central swap authority;

calculating an initial collateral requirement for each counterparty to a

swap with the central swap authority based on an agreed upon termination payment;

assuring that required collateral by each counterparty is in the central swap

authority's possession each delivery day;

transferring the payment under the forward contract from one

counterparty's funds held by the central swap authority to the other counterparty's control

for each day's notional delivery under the forward contract;

determining a floating rate index contract price for a day;

updating new collateral requirements based on the difference between the fixed rate contract price and the floating rate index contract price for the previous day;

terminating the paired swap <u>utilizing a termination device coupled to the</u> <u>central swap authority</u> if one of the counterparties defaults in any of its obligations to make payments to the central swap authority ~~and making the agreed upon termination~~ ~~payment to the non-defaulting paired swap counterparty~~.

3.   (Currently Amended) A method of risk mitigation and collateralization of a swap used to hedge a forward contract, comprising:

qualifying a plurality of eligible counterparties, pairs of which desire to form swaps;

forming offsetting paired basis swaps with a central swap authority for each of the pairs of counterparties <u>utilizing a data storage device coupled to the central</u> <u>swap authority for storing all of the swaps the system counterparty enters into with each</u> <u>other counterparty and a communication device coupled to the central swap authority to</u> <u>communicate the formation of the paired swaps to each of the pairs of counterparties;</u>

evaluating an initial fixed value at risk for each counterparty to the swaps with the central swap authority <u>utilizing a communication device coupled to the data</u> <u>storage device of the central swap authority</u>;

calculating an initial collateral requirement for each counterparty to a swap with the central swap authority based on an agreed upon termination payment;

assuring that required collateral by each counterparty is in the central swap authority's possession each delivery day;

transferring the payment under the forward contract from one counterparty's funds held by the central swap authority to the other counterparty's control for each day's notional delivery under the forward contract;

determining a floating rate index contract price for a day;

updating new collateral requirements based on the difference between the fixed rate contract price and the floating rate index contract price for the previous day;

terminating the paired swap utilizing a termination device coupled to the central swap authority if one of the counterparties defaults in any of its obligations to make payments to the central swap authority and making the agreed upon termination payment to the non-defaulting paired swap counterparty or exercising a swaption with such counterparty.

4. (Currently Amended) The credit risk mitigation system of Claim 1, wherein the appropriate response is a termination of the swap with a non-defaulting paired swap counterparty with a termination payment to a the non-defaulting paired swap counterparty party.

5. (Currently Amended) The credit risk mitigation system of Claim 1, wherein the appropriate response is a substitution re-pairing of the swap with a non-defaulting counterparty with an equal offsetting swap.

6. (Currently Amended) The credit risk mitigation system of Claim 1, wherein the appropriate response is a re-pairing of the swap with a non-defaulting counterparty with a correlated offsetting swap which is terminated and replaced by an equal offsetting swap and a correlated termination payment to a the non-defaulting party counterparty.

7. (New) The credit risk mitigation system of Claim 1 wherein the appropriate response includes the termination of all of the accepted swaps of a counterparty which is in default, thereby creating an unpaired swap for each such terminated swap, the system counterparty also taking an appropriate response as to each non-defaulting counterparty's unpaired swap.

8. (New) The credit risk mitigation system of Claim 7 wherein the appropriate response as to an unpaired swap is re-pairing one non-defaulting counterparty's unpaired swap with another non-defaulting counterparty's equal offsetting unpaired swap to form a new pair of swaps between two non-defaulting counterparties and the system counterparty.

9. (New) The credit risk mitigation system of Claim 7 wherein the appropriate response as to an unpaired swap is a re-pairing of one unpaired swap between one non-defaulting counterparty and the central counterparty with a correlated offsetting unpaired swap of another non-defaulting counterparty, which correlated offsetting unpaired swap is terminated in favor of an equal offsetting swap and a correlation termination payment to the non-defaulting counterparty to create a new pair of swaps between two non-defaulting counterparties and the system counterparty.

10. (New) The credit risk mitigation system of Claim 7 wherein the appropriate response as to an unpaired swap is a termination of the non-defaulting counterparty's unpaired swap and a termination payment to the non-defaulting counterparty.

11. (New) The credit risk mitigation system of Claim 8 wherein the appropriate response as to an unpaired swap between a non-defaulting counterparty and the system counterparty which the system counterparty is unable to re-pair with another unpaired

equal offsetting swap of another non-defaulting counterparty is a re-pairing of one unpaired swap between one non-defaulting counterparty and the central counterparty with a correlated offsetting unpaired swap between the central counterparty and another non-defaulting counterparty which is terminated in favor of an equal offsetting swap and a correlation termination payment to the non-defaulting counterparty to create a new pair of swaps between two non-defaulting counterparties and the system counterparty.

12. (New) The credit risk mitigation system of Claim 11 wherein the appropriate response as to an unpaired swap between a non-defaulting counterparty and the system counterparty which the system counterparty is unable to either re-pair with another unpaired equal offsetting swap of another non-defaulting counterparty or re-pair after terminating a correlated offsetting unpaired swap of another non-defaulting counterparty is to terminate the unpaired swap between the non-defaulting counterparty and the system counterparty and make a termination payment to the non-defaulting counterparty.

13. (New) The credit risk mitigation system of Claim 1 wherein the appropriate response to a default by one counterparty to paired swaps with the central counterparty includes choosing one of the following for a swap between the central counterparty with a non-defaulting party: re-pairing the swap with another equal offsetting swap between the central counterparty and another non-defaulting party; re-pairing the swap with another non-defaulting counterparty's equal offsetting swap which is formed by that counterparty's correlated offsetting swap between the central counterparty and another non-defaulting counterparty being terminated and replaced

by the equal offsetting swap and a correlation termination payment; terminating the swap in favor of a correlated swap and a correlation payment with the correlated swap re-paired with another non-defaulting counterparty's correlated offsetting swap; and terminating the swap and making a termination payment to the non-defaulting party.

14. (New) The credit risk mitigation system of Claim 1 wherein an appropriate response as to each of the non-defaulting counterparties' unpaired swaps is selected by ranking the swaps in a manner which allows a systematic selection of the exercise of swaptions in order to minimize the total cost to the system counterparty after termination of all of a defaulting party's swaps.

15. (New) The credit risk mitigation system of Claim 13 wherein an appropriate response as to each of the non-defaulting counterparties' unpaired swaps is selected by ranking the swaps in a manner which allows a systematic selection of the exercise of swaptions in order to minimize the total cost to the system counterparty after termination of all of a defaulting party's swaps.

16. (New) The credit risk mitigation system of Claim 14 wherein the system counterparty uses the volatility of a price index applicable to each swap to rank the swaps.

17. (New) The credit risk mitigation system of Claim 15 wherein the system counterparty uses the volatility of a price index applicable to each swap to rank the swaps.

18. (New) The credit risk mitigation system of Claim 7 wherein the appropriate response to a default by one counterparty to paired swaps with the central counterparty includes choosing one of the following for a swap between the central counterparty with a non-defaulting party: re-pairing the swap with another equal offsetting swap between the central counterparty and another non-defaulting party; re-pairing the swap with another non-defaulting counterparty's equal offsetting swap which is formed by that counterparty's correlated offsetting swap between the central counterparty and another non-defaulting counterparty being terminated and replaced by the equal offsetting swap and a correlation termination payment; terminating the swap in favor of a correlated swap and a correlation payment with the correlated swap re-paired with another non-defaulting counterparty's correlated offsetting swap; and terminating the swap and making a termination payment to the non-defaulting party.

19. (New) The credit risk mitigation system for swap transactions between counterparties of Claim 1 wherein the paired swaps are structured to cover payments due on an underlying forward contract between the counterparties to the paired swaps with the central counterparty.

20. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 1 wherein the paired swaps are structured to cover the outstanding notional quantities due on the underlying forward contract between the counterparties to the paired swaps with the central counterparty.

21. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 19 wherein the paired swaps are structured to cover the outstanding notional

quantities due on the underlying forward contract between the counterparties to the paired swaps with the central counterparty.

22. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 1 wherein the communication means recalculates the collateral requirements for each accepted swap on a periodic basis.

23. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 22 wherein the collateral requirements are recalculated on a daily basis.

24. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 1 wherein the collateral requirements for a counterparty's accepted swaps are calculated based on the cost to the central counterparty upon the default of that counterparty.

25. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 24 wherein the central counterparty ranks products in a manner which allows a systematic selection of the exercise of appropriate responses in order to minimize the total cost of appropriate responses in the event of a counterparty's default.

26. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 24 wherein collateral required of a counterparty is set equal to the total cost of the appropriate responses the central counterparty will take in the event of the counterparty's default so that the central counterparty's liability upon a counterparty's default will be equal to the collateral it has from the defaulting counterparty.

27. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 26 wherein the collateral the central counterparty requires from a

counterparty is set so as to allow the central counterparty to maintain a flat book in the event of the counterparty's default.

28. (New) The credit risk mitigation system of Claim 27 wherein the appropriate response to a default by one counterparty to paired swaps with the central counterparty includes choosing one of the following for each swap between the central counterparty with a non-defaulting party which had been previously paired with a swap between the central counterparty and the defaulting counterparty: re-pairing the swap with another swap between the central counterparty and another non-defaulting party; re-pairing the swap with another non-defaulting counterparty's matching swap which is formed by that counterparty's correlated swap between the central counterparty and another non-defaulting counterparty being terminated and replaced by the matching swap and a correlation payment; terminating the swap in favor of a correlated swap and a correlation payment with the correlated swap re-paired with another non-defaulting counterparty's matching swap; and terminating the swap and making a termination payment.

29. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 23 wherein the collateral the central counterparty requires from a counterparty for a paired swap is calculated based on a notional delivery quantity and the required collateral declines according to a notional delivery schedule.

30. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 23 wherein the collateral the central counterparty requires from a counterparty for a paired swap is calculated based on the outstanding notional quantities from the swap.

31. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 1 wherein collateral in excess of the amount the central counterparty requires from a counterparty for each of its accepted swaps provides a measure of the counterparty to enter into additional paired swaps without having to provide additional collateral.

32. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 23 wherein collateral in excess of the amount the central counterparty requires from a counterparty for each of its accepted swaps provides a measure of the counterparty to enter into additional paired swaps without having to provide additional collateral.

33. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 23 wherein the collateral the central counterparty requires from a counterparty for a paired swap is controlled by the central counterparty.

34. (New)The credit risk mitigation system for swap transactions between counterparties of Claim 1 wherein the termination means further includes a termination of a paired swap between two non-defaulting counterparties upon both non-defaulting counterparties instructing the central counterparty to terminate the paired swap.

35. (New) The method of Claim 2, wherein terminating the paired swap includes terminating the defaulting counterparty's swap and taking an appropriate action with the non-defaulting counterparty's swap.

36. (New) The method of Claim 35, wherein taking the appropriate action includes attempting to re-pair one non-defaulting counterparty's unpaired swap with another

non-defaulting counterparty's equal offsetting swap to form a new pair of swaps between two non-defaulting counterparties and the system counterparty.

37. (New) The method of Claim 35, wherein taking the appropriate action includes attempting to re-pair one unpaired swap between one non-defaulting counterparty and the central counterparty with a correlated offsetting unpaired swap of another non-defaulting counterparty, by terminating the correlated offsetting unpaired swap in favor of an equal offsetting swap and a correlation termination payment to the non-defaulting counterparty thereby creating a new pair of swaps between two non-defaulting counterparties and the system counterparty.

38. (New) The method of Claim 35, wherein taking the appropriate action includes terminating the non-defaulting counterparty's unpaired swap and making a termination payment to the non-defaulting counterparty.

39. The method of Claim 35, wherein taking the appropriate action includes taking one of the following actions: re-pairing one non-defaulting counterparty's unpaired swap with another non-defaulting counterparty's equal offsetting swap to form a new pair of swaps between two non-defaulting counterparties and the system counterparty; re-pairing one unpaired swap between one non-defaulting counterparty and the central counterparty with a correlated offsetting unpaired swap of another non-defaulting counterparty, by terminating the correlated offsetting unpaired swap in favor of creating an equal offsetting swap and a correlation termination payment to the non-defaulting counterparty thereby creating a new pair of swaps between two non-defaulting counterparties and the system counterparty; and terminating the non-

defaulting counterparty's unpaired swap and making a termination payment to the non-defaulting counterparty.

40. (New) The method of Claim 2, further including terminating all of the paired swaps of the defaulting party and taking appropriate actions with each of the non-defaulting counterparty's swaps which were paired with the defaulting party's swaps.

41. (New) The method of Claim 40, wherein the appropriate actions include re-pairing any unpaired swaps of the non-defaulting parties which are equal offsetting swaps to form new pairs of swaps between two non-defaulting counterparties and the system counterparty.

42. (New) The method of Claim 41, wherein the appropriate actions include includes attempting to re-pair any unpaired swaps of non-defaulting counterparties, which cannot be re-paired with equal offsetting swaps with a correlated offsetting unpaired swap of another non-defaulting counterparty, by terminating the correlated offsetting unpaired swap in favor of creating an equal offsetting swap and a correlation termination payment to the non-defaulting counterparty thereby creating a new pair of swaps between two non-defaulting counterparties and the system counterparty.

43. (New) The method of Claim 42, wherein taking the appropriate action includes terminating any non-defaulting counterparties' unpaired swaps and making termination payments to the non-defaulting counterparties which cannot be either re-paired with equal offsetting swaps or re-paired with correlated offsetting unpaired swaps of other non-defaulting counterparties.

44. (New) The method of Claim 2 further including maintaining a balanced book following the termination of all of a defaulting counterparty's swaps by choosing one

of the following actions for any non-defaulting counterparties' unpaired swaps: terminating the paired swap and making the termination payment for the terminated paired swap; re-pairing the paired swap together with a correlation payment to the non-defaulting counterparty; and substituting the paired swap, which assures that the central swap authority's positions are maintained in balance.

45. (New) The method of Claim 2 further including using a value at risk model, which may result in a different collateral requirement depending on if the product is held long or short, to calculate the initial collateral.

46. (New) The method of Claim 2 further including structuring of the paired swaps to cover payments due on the underlying forward contract.

47. (New) The method of Claim 46 wherein the structuring of the paired swaps reduces the notional quantity on which the settlements of the paired swaps are calculated, based on each day's notional delivery.

48. (New) The method of Claim 2 further including balancing the obligations of the central swap authority such that the termination payment for each paired swap is capped at an amount collected prior to such termination.

49. (New) The method of Claim 2 including calculating the initial collateral and the updated collateral from each counterparty's paired swaps based on the sum of the termination payments and the correlated termination payments required by the central swap authority to balance the central swap authority's books in the event of a swap counterparty default.

50. (New) The method of Claim 49 including updating the recalculation of the new collateral periodically upon review of new swaps or contracts entered into by a swap counterparty.

51. (New) The method of Claim 2 including netting the collateral requirements of a plurality of contracts based on the potential disposition of that set of contracts if the holder of the plurality of contracts defaults to a central counterparty.

52. (New) The method of Claim 2 wherein two paired swap counterparties may jointly terminate paired swaps without paying termination payments to the central counterparty or causing the central counterparty to find either of the two paired swap counterparties to be in default.

53. (New) The method of Claim 3, wherein exercising a swaption results in substituting a swap of a non-defaulting counterparty with a correlated swap and making a correlation payment to such non-defaulting party.

54. (New) The method of Claim 53, further including re-pairing the correlated swap with an equal and offsetting un-paired swap to create a new paired swap between two non-defaulting counterparties and the central counterparty.

55. (New) The method of Claim 3, wherein exercising the swaption includes re-pairing any unpaired swaps of the non-defaulting parties which are equal offsetting swaps to form new pairs of swaps between two non-defaulting counterparties and the system counterparty.

56. (New) The method of Claim 3, further including terminating all of the paired swaps of the defaulting party.

57. (New) The method of Claim 3, wherein deciding to either make the termination payment or exercising a swaption is done by selecting an appropriate response.

58. (New) The method of Claim 57, wherein selecting the appropriate response includes re-pairing any unpaired swaps of the non-defaulting parties which are equal offsetting swaps to form new pairs of swaps between two non-defaulting counterparties and the system counterparty.

59. (New) The method of Claim 58, wherein selecting the appropriate response includes attempting to re-pair any unpaired swaps of non-defaulting counterparties, which cannot be re-paired with equal offsetting swaps with a correlated offsetting unpaired swap of another non-defaulting counterparty, by terminating the correlated offsetting unpaired swap in favor of creating an equal offsetting swap and a correlation termination payment to the non-defaulting counterparty thereby creating a new pair of swaps between two non-defaulting counterparties and the system counterparty.

60. (New) The method of Claim 59, wherein selecting the appropriate response includes terminating any non-defaulting counterparties' unpaired swaps and making termination payments to the non-defaulting counterparties which cannot be either re-paired with equal offsetting swaps or re-paired with correlated offsetting unpaired swaps of other non-defaulting counterparties.

61. (New) The method of Claim 3 further including maintaining a balanced book following the termination of all of a defaulting counterparty's swaps by choosing one of the following actions for any non-defaulting counterparties' unpaired swaps: terminating the paired swap and making the termination payment for the terminated paired swap; re-pairing the paired swap together with a correlation payment to the

non-defaulting counterparty; and substituting the paired swap, which assures that the central swap authority's positions are maintained in balance.

62. (New) The method of Claim 3 further including using a value at risk model, which may result in a different collateral requirement depending on if the product is held long or short, for calculating the initial and updated collateral requirements.

63. (New) The method of Claim 3 further including structuring of the paired swaps to cover payments due on the underlying forward contract.

64. (New) The method of Claim 63 wherein the structuring of the paired swaps reduces the notional quantity on which the settlements of the paired swaps are calculated, based on each day's notional delivery.

65. (New) The method of Claim 3 further including balancing the obligations of the central swap authority such that the termination payment for each paired swap is capped at an amount collected prior to such termination.

66. (New) The method of Claim 3 including calculating the initial collateral and the updated collateral from each counterparty's paired swaps based on the sum of the termination payments and the correlated termination payments required by the central swap authority to balance the central swap authority's books in the event of a swap counterparty default.

67. (New) The method of Claim 66 including updating the recalculation of the new collateral periodically upon review of new swaps or contracts entered into by a swap counterparty.

68. (New) The method of Claim 3 including netting the collateral requirements of a plurality of contracts based on the potential disposition of that set of contracts if the holder of the plurality of contracts defaults to a central counterparty.

69. (New) The method of Claim 3 wherein two paired swap counterparties may jointly terminate paired swaps without paying termination payments to the central counterparty or causing the central counterparty to find either of the two paired swap counterparties to be in default.